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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,559	03/03/2004	Shoichiro Yasunami	Q80212	3278

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EXAMINER

LE, HOA VAN

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,559

Applicant(s)

YASUNAMI ET AL.

Examiner

Hoa V. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 with respect to the elected and applied species is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-8 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03 March 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

This is in response to Paper filed 10 May 2005.

I. Applicants elect resins A1-2 on page 27, A2-5 on page 33 and monomer being read on formula (4) as a part in resin A1-33 on page 31 of the specification. The elected resins and monomer have been considered and searched. The consideration and search are extended to the applied species. Others have not been considered, searched or examined until all of the elected and applied species are overcome.

II. Prior art filed on 03 March 2004 have been considered to the extent of the English being provided.

III. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-4 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipate by Uenishi et al (6,489,080).

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Uenishi et al disclose and teach a positive resist composition comprising a resin being read on the resins of the A1 with resins c(25, 28, 29, 30, 31, 32 and 36), resins of the A2 with resins c(3, 4, 5, 6, 7, 8, 9, 15, 16, 17, 19, 20, 22, 23, 33, 34, 35, 36 and 37) on columns 37-44, up to 20 wt% of a compound of generating sulfonic acid up on irradiation with active rays or radiation (col.19, lines 7-12) represented by compounds I(1-14), II(1-5) and III(1-8) on columns 11-18, PAG(3-9, 14, 20, 21, 22, 23, 24, 25, 26 and 27), PGA(4-5, 6, 7, 8, 9, 10, 11, 13, 15, 17, 18, 19, 20, 21, 22, 26, 27, 28, 29, 30, 31, 32, 33 and 34), PGA(5-12) and PAG(6-1-15) on the bottom of columns 24-35, a nitrogen containing base on column 65, line 21 to column 66, line 37, fluorine/silicon surfactants on column 67, lines 26-35.

Since Uenishi et al disclose and teach the claimed embodiments, the above claims are found to be anticipated by Uenishi et al.

IV. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uenishi et al (6,489,080) considered in view of Ishihara et al (2004/0033434).

Uenishi et al disclose and teach a positive resist composition comprising a resin being read on the resins of the A1 with resins c(25, 28, 29, 30, 31, 32 and 36), resins of the A2 with resins c(3, 4, 5, 6, 7, 8, 9, 15, 16, 17, 19, 20, 22, 23, 33, 34, 35, 36 and 37) on columns 37-44, up to 20 wt% of a compound of generating sulfonic acid up on irradiation with active rays or radiation (col.19, lines 7-12) represented by compounds I(1-14), II(1-5) and III(1-8) on columns 11-18, PAG(3-9, 14, 20, 21, 22, 23, 24, 25, 26 and 27), PGA(4-5, 6, 7, 8, 9, 10, 11, 13, 15, 17, 18, 19, 20, 21, 22, 26, 27, 28, 29, 30, 31, 32, 33 and 34), PGA(5-12) and PAG(6-1-15) on the bottom of columns 24-35, a nitrogen containing base on column 65, line 21 to column 66, line 37, fluorine/silicon surfactants on column 67, lines 26-35.

Uenishi et al do not specify “an additional compound capable of generating a carboxylic acid upon irradiation with active rays or radiation as that in claim 5. Ishihara et al at paragraph 0054 is cited to show the known use of the claimed compound for providing a carboxylic acid generating compound in order to reduce a solubility of a resin in formulation a positive resist composition on paragraph 0075.

Since the above references are all related to positive resist compositions, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include an additional compound capable of generating a

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carboxylic acid upon irradiation with active rays or radiation in Uenishi et al positive resist compositions for a reasonable expectation of further reducing a solubility of the resin when the positive resist composition is exposed to the irradiation as disclosed, taught, suggest and obtained in Ishihara et al.

V. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipate by Ishihara et al (2004/0033434).

Ishihara et al disclose and teach a positive resist composition comprising a resin being read on the resins of the A1 with resins of the formula [11] with $R^{(12,13)}$ and $^{14)}$ being hydrogen..., $R^{(16)}$ being hydrogen..., $R^{(17)}$ being an alkyl, $R^{(18)}$ being aralkyl..., $R^{(19)}$ being a hydrogen...and with r, t and e being natural numbers, a resin being read on the resins of the A2 with resins of the formula [11] with $R^{(11,12)}$ and $^{14)}$ being hydrogen..., $R^{(16)}$ being hydrogen..., $R^{(17)}$ being an alkyl, $R^{(18)}$ being an alkyl..., $R^{(19)}$ being a hydrogen...and with r, t and e being natural numbers on paragraphs 0078 to 0082, 0085 and 0087-0088, formula [12] with $R^{(12,13,14,16,17, 18 \text{ and } 19)}$ being the same as those in formula [11] and with r', t' and e' being natural numbers on paragraphs 0091-0093, up to 10 wt% of a compound of generating sulfonic acid up on irradiation with active rays or radiation on paragraphs 0065-0070 and 0072, 0087-0088, a nitrogen containing base on paragraph 0114,

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fluorine/silicon surfactants on paragraph 0117 and compound capable of generating a carboxylic acid upon irradiation with active rays or radiation.

Since Ishihara et al disclose and teach the claimed embodiments, the above claims are found to be anticipated by Uenishi et al.

VI. Urano et al (5,976,759 and 6,656,660) and Sasaki et al (6,727,040) have about the same teachings as those applied above. The are cumulative.

VII. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa V. Le whose telephone number is 571-272-1332. The examiner can normally be reached from 6:30 AM to 4:30 PM on Monday though Thursday and about the same time of most Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526.

Applicants may file a paper by (1) fax with a central facsimile receiving number 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available

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through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hoa V. Le
Primary Examiner
Art Unit 1752

HVL
10 August 2005.

HOA VAN LE
PRIMARY EXAMINER
